

REMARKS

This application has been carefully reviewed in light of the Office Action dated July 2, 2003. Claims 1 to 28 remain in the application, of which Claims 1 to 4, 6 to 19 and 21 to 28 have been amended. Claims 1, 7, 11, 17 and 21 to 28 are the independent claims herein. Reconsideration and further examination are respectfully requested.

Applicant wishes to thank the Examiner for the indication that Claims 2 to 6, 8 to 10, 12 to 16 and 18 to 20 would be allowable if they are rewritten into independent form. Applicant has chosen not to rewrite any of these claims since it is believed that each of the independent claims are allowable for at least the reasons set forth below.

Claims 1, 7, 11, 17 and 21 to 28 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,456,340 (Margulis) in view of U.S. Patent No. 6,141,012 (Bollman). Reconsideration and withdrawal of the rejections are respectfully requested.

The present invention concerns retention of meta-data elements associated with digital images that are combined or transformed. According to the invention, at least one meta-data element associated with a digital image has a self-describing attribute tag which describes a manner of retention in which the meta-data element of the digital image, and a corresponding similarly identified meta-data element from another digital image, are to be retained. The retention of the meta-data elements is dependent on the configuration of the meta-data elements. Thus, in one aspect, the meta-data is augmented to the digital image data, while in another aspect, the meta-data elements are combined or retained by reading the attribute tags. As a result, the self describing attribute tags of the meta-data element defines the manner in which the meta-data elements are to be retained.

Referring specifically to the claims, amended independent Claim 1 is a method of augmenting meta-data associated with a digital image, wherein the meta-data

comprises at least one meta-data element, the method comprising adding a self-describing attribute tag to the at least one meta-data element, wherein each attribute tag added to a meta-data element describes a manner of retention in which the meta-data element, and a corresponding similarly identified meta-data element from another digital image are to be retained, in a case where the two images are combined, wherein the retention of the meta-data elements is dependent on the configuration of the meta-data elements.

Amended independent Claims 21 and 25 are apparatus and computer-readable medium claims, respectively, that substantially correspond to Claim 1.

Amended independent Claim 7 is along the lines of Claim 1 and is a method of augmenting meta-data associated with a digital image, wherein the meta-data comprises at least one meta-data element, the method comprising adding a self describing attribute tag to the at least one meta-data element, wherein each attribute tag added to a meta-data element describes a manner of retention in which a corresponding meta-data element is to be retained in the case where the digital image is transformed, wherein the retention of the meta-data element is dependent on the configuration of the meta-data element.

Amended independent Claims 22 and 26 are apparatus and computer-readable medium claims, respectively, that substantially correspond to Claim 7.

Amended independent Claim 11 is a method of combining meta-data associated with a plurality of images, wherein the images each have associated therewith meta-data comprising at least one corresponding meta-data element having associated therewith an attribute tag which describes a manner of retention in which the corresponding meta-data element is to be retained in a case where the images are combined, the method comprising the steps of reading the attribute tag of each meta-data element to identify the manner of retention in which the corresponding meta-data element is to be retained, and

combining one or more similar meta-data elements associated with the images, and retaining the combined meta-data elements and one or more further meta-data elements, depending on the attribute tags corresponding to those meta-data elements.

Amended independent Claims 23 and 27 are apparatus and computer-readable medium claims, respectively, that substantially correspond to Claim 11.

Amended independent Claim 17 is a method of retaining meta-data associated with a digital image, wherein the image has associated therewith meta-data comprising at least one meta-data element having associated therewith an attribute tag which describes a manner of retention in which the meta-data element is to be retained in a case where the image is transformed, the method comprising the steps of reading the attribute tag of the meta-data element to identify the manner of retention in which the meta-data element is to be retained, and retaining the meta-data element of the image in accordance with the attribute tag corresponding to the meta-data element, wherein the retention of the meta-data element is dependent on the configuration of each meta-data element.

Amended independent Claims 24 and 28 are apparatus and computer-readable medium claims, respectively, that substantially correspond to Claim 17.

The applied art, alone or in any permissible combination, is not seen to disclose or to suggest the features of Claims 1, 7, 11, 17 and 21 to 28. More particularly, with regard to Claims 1, 7, 21, 22, 25 and 26, the applied art is not seen to disclose or to suggest at least the feature of adding a self-describing attribute tag to a meta-data element which describes a manner of retention in which the meta-data element, and a corresponding similarly identified meta-data element from another digital image are to be retained, in a case where the two images are combined or transformed, wherein the retention of the meta-

data elements is dependent on the configuration of the meta-data elements. Similarly, with regard to Claims 11, 17, 23, 24, 27 and 28, the applied art is not seen to disclose or to suggest at least the feature of combining one or more similar meta-data elements associated with digital images, and retaining the combined meta-data elements and one or more further meta-data elements, depending on the attribute tags corresponding to those meta-data elements (Claims 11, 23 and 27), or retaining the meta-data element of the image in accordance with the attribute tag corresponding to the meta-data element, wherein the retention of the meta-data element is dependent on the configuration of each meta-data element (Claims 17, 24 and 28), where for each of Claims 11, 17, 23, 24, 27 and 28, each image has associated therewith meta-data comprising at least one meta-data element having associated therewith an attribute tag which describes a manner of retention in which the meta-data element is to be retained in a case where the image is combined or transformed.

Margulis is seen to disclose an image processing apparatus for use in a display system. The apparatus has a display device for viewing an image, and a geometric transformation module that is configured to precondition the image data with geometric transformations to compensate for characteristics of the display system. The geometric transformation module is adapted to process an image-key meta data stream associated with a video data stream. The meta data stream includes a description of a key area in the video and data concerning an object to be placed in that key area of the video. The module keeps track of the key area in the video stream and replaces it with the object from the image-key meta data stream. (See column 16, line 38 to column 17, line 2.) Thus, Margulis merely describes the modification of image data with meta data, but nothing in Margulis is seen to disclose or to suggest that a self describing attribute tag is added to the meta data, where the attribute tag describes a manner in which the meta data element and a

corresponding meta data element of another digital image are to be retained in a case where the images are combined or transformed. Accordingly, Margulis is not seen to disclose or to suggest the above-described features of Claims 1, 7, 11, 17 and 21 to 28. *as amended*

Bollman is not seen to add anything that would have overcome Margulis' deficiencies even if it could have been combined with Margulis. In this regard, Bollman is seen to disclose a scheme that generates image processing source code for custom applications automatically by using structured image (SI) technology. A structured image definition (SID) file is associated with a top level SI. SIs are described in the SID file as a set of tags in structured image definition language (SIDL). As Applicant understands Bollman, the tags are specified by the name of the tag type and the tag body enclosed by "{" and "}". Tags may be named using the ":name" syntax. The tag name can be used as reference to other tags by prefixing "\$". An Object tag is the top level tag of the SI, where the Object tag represents an IPD object and its description is in the referenced tag "ipdl". The IPD tag "ipdl" defines the AspectRatio and DefaultWidth tags, the pasteboard attributes FitMode, Justification and Angle, and four Merge tags whose sequence specifies the merging order of "merge1" through "merge4". Each Merge tag specifies a merging point relative to the pasteboard with the MergePoint tag, and an image processing sequence with a Path tag. The Path tag denotes the child object with another Object tag, the relative size with a Size tag, the position of the ControlPoint (relative to the child) with the ControlPoint tag, and the image processing operations with a list of IPO tags. (See column 15, lines 35 to 59.) However, Applicant fails to see anything in Bollman which discloses or suggests a self describing attribute tag which describes a manner in which a corresponding meta-data element and a similarly identified meta-data element are to be retained, in a case where two digital images are to be combined or transformed.

Accordingly, a combination of Margulis and Bollman would not have rendered the invention obvious at the time of the invention.

In view of the foregoing amendments and remarks, all of amended independent Claims 1, 7, 11, 17 and 21 to 28 are believed to be allowable over the applied art. Accordingly, the entire application is believed to be in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,


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